

**TRANSMITTAL  
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Total Number of Pages in This Submission 5\*

Application Number	10/564,902
Filing Date	June 15, 2006
First Named Inventor	William Patrick Hems
Art Unit	1621
Examiner Name	
Attorney Docket No.	JMYS-140US

**ENCLOSURES (Check all that apply)**

- |   |  |   |
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|---|--|---|

**Remarks:**

\*The total number of pages indicated above does not include the number of pages in the references submitted along with the Information Disclosure Statement.

**SIGNATURE OF APPLICANT, ATTORNEY OR AGENT**

Firm Name	RatnerPrestia		
Signature			
Printed Name	Christopher R. Lewis		
Date	January 3, 2007	Registration No.	36,201

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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Office, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, ALEXANDRIA, VA 22313-1450.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appln. No: 10/564,902  
Applicants: William Patrick Hems et al.  
Filed: June 15, 2006  
Title: CATALYSTS  
TC/A.U.: 1621  
Examiner:

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98 and to the duty of disclosure set forth in 37 C.F.R. § 1.56, the Examiner in charge of the above-identified application is requested to consider and make of record the references listed on the PTO/SB/08A and PTO/SB/08B forms submitted herewith. A copy of each of the listed "Foreign Patent Documents" listed on the PTO/SB/08A and PTO/SB/08B forms is enclosed. A copy of two U.S. patent document, namely, U.S. Publication No. 2003/0045727 and U.S. Patent No. 6,720,439, are also enclosed, as explained below.

Although the information submitted herewith may be "material" to the Examiner's consideration of the subject application, this submission is not intended to constitute an admission that such information is "prior art" as to the claimed invention.

In accordance with 37 C.F.R. § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.

Japanese Patent No. 2003-104993 is not in the English language, but an English equivalent thereof, namely, U.S. Patent No. 6,720,439, is submitted herewith.

Japanese Patent Nos. 2002-284790 and 11-189558 are not in the English language, but a machine translations thereof are attached to the copies of the references submitted herewith.

International Publication No. WO 01/58843 is not in the English language, but an English equivalent thereof, namely, U.S. Publication No. 2003/0045727, is submitted herewith.

This Information Disclosure Statement is being filed before mailing of the first Official Action on the merits. No first Official Action on the merits has yet been received and it is presumed that none has yet been mailed. No fee or statement is required. 37 C.F.R. § 1.97(b).

Respectfully submitted,



Christopher R. Lewis, Reg. No. 36,201  
Attorney for Applicants

CRL/lrb

Enclosures: PTO/SB/08A & PTO/SB/08B  
Copy of twenty-one (21) references

Dated: January 3, 2007

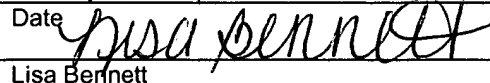
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

SHEET 1 of 2

**Complete if Known**

Application Number	10/564,902
Filing Date	June 15, 2006
First Named Inventor	William Patrick Hems
Art Unit	1621
Examiner Name	
Attorney Docket No.	JMYS-140US

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US-6,720,439-B1	04-13-2004	Ohkuma et al.	
	2	US-2003/0045727-A1	03-06-2003	Nakano et al.	
	3	US-2002/0095056-A1	07-18-2002	Cobley et al.	
		US-			
		US-			
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**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date (MM-DD-YYYY)	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	4	EP-1 323 724-A2	07-02-2003	Kanto Kagaku Kabushiki Kaisha		<input type="checkbox"/>
	5	EP-1 146 037-A1	10-17-2001	Nippon Soda Co., Ltd.		<input type="checkbox"/>
	6	EP-1 134 226-A2	09-19-2001	Takasago International Corporation		<input type="checkbox"/>
	7	EP-0 718 265-B1	08-23-2000	NKK Corporation et al.		<input type="checkbox"/>
	8	JP-2003-104993-A	04-09-2003	Nagoya Industrial Science Research Institute		<input type="checkbox"/>
	9	JP-2002-284790-A	10-03-2002	Nippon Soda Co., Ltd.		<input checked="" type="checkbox"/>
	10	JP-11-189558-A	07-13-1999	Japan Science & Technology Corp. et al.		<input checked="" type="checkbox"/>
	11	WO-03/048173-A1	06-12-2003	Chirotech Technology Limited		<input type="checkbox"/>
	12	WO-01/74829-A1	10-11-2001	Chirotech Technology Limited		<input type="checkbox"/>
	13	WO-01/58843-A1	08-16-2001	Asahi Kasei Kabushiki Kaisha		<input type="checkbox"/>
	14	WO-99/24410-A1	05-20-1999	The Pennsylvania State University		<input type="checkbox"/>

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

<sup>1</sup>Applicant's unique citation designation number (optional).

<sup>2</sup>See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard St.3).

<sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

<sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

<sup>6</sup>Applicant is to place a check mark here if English language translation is attached.

The collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

Application Number

Filing Date

First Named Inventor

Art Unit

Examiner Name

Attorney Docket No.

SHEET 2 of 2

**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	15	EKKHARD LINDNER et al., "Supported organometallic complexes Part XXXV. Synthesis, characterization, and catalytic application of a new family of diamine(diphosphine)ruthenium(II) complexes," <i>Journal of Organometallic Chemistry</i> , Vol. 665 (2003), pp. 176-185.	<input type="checkbox"/>
	16	TAKESHI OHKUMA et al., "trans-RuH( $\eta^1$ -BH <sub>3</sub> )(binap)(1,2-diamine): A Catalyst for Asymmetric Hydrogenation of Simple Ketones under Base-Free Conditions," <i>J. Am. Chem. Soc.</i> , Vol. 124, No. 23, 2002, pp. 6508-6509.	<input type="checkbox"/>
	17	JANINE COSSY et al., "Ruthenium-catalyzed asymmetric reduction of 1,3-diketones using transfer hydrogenation," <i>Tetrahedron Letters</i> , Vol. 42 (2001), pp. 5005-5007.	<input type="checkbox"/>
	18	DENDUKURI NAGAMANI et al., "Pyrrolidyl Polyamines: Branched, Chiral Polyamine Analogues That Stabilize DNA Duplexes and Triplexes," <i>Organic Letters</i> , 2001, Vol. 3, No. 1, pp. 103-106.	<input type="checkbox"/>
	19	CHING-WEN LIN et al., "A highly efficient and stereospecific borane reduction of spiro[4.4]nonane-1,6-dione catalyzed by a chiral oxazaborolidine," <i>Tetrahedron Letters</i> , Vol. 41 (2000), pp. 4425-4429.	<input type="checkbox"/>
	20	JACQUELINE S. BARLOW et al., "New building blocks for efficient and highly diastereoselective polyol production—synthesis and utility of (R',R',S,S) and (S',S',R,R)-2,3-butane diacetal protected butane tetrol derivatives," <i>J. Chem. Soc., Perkin Trans. 1</i> , 1999, pp. 1627-1629.	<input type="checkbox"/>
	21	GEORGE H. P. ROOS et al., "Synthesis of novel C <sub>2</sub> -symmetric ligands based on (R,R)- and (S,S)-diphenyl-1,3-propanediol," <i>Tetrahedron: Asymmetry</i> , Vol. 10 (1999), pp. 991-1000.	<input type="checkbox"/>
	22	TAKESHI OHKUMA et al., "BINAP/1,4-Diamine—Ruthenium(II) Complexes for Efficient Asymmetric Hydrogenation of 1-Tetralones and Analogues," <i>Organic Letters</i> , Vol. 6, No. 16, 2004, pp. 2681-2683.	<input type="checkbox"/>
			<input type="checkbox"/>
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Examiner Signature		Date Considered	
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<sup>1</sup>Applicant's unique citation designation number (optional).

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